The Multiple Faces of Interparental Conflict: Implications for Cascades of Children's Insecurity and Externalizing Problems

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Abstract

This multi-study paper examined the relative strength of mediational pathways involving hostile, disengaged, and uncooperative forms of interparental conflict, children's emotional insecurity, and their externalizing problems across two longitudinal studies. Participants in Study 1 consisted of 243 preschool children (*M* age = 4.60 years) and their parents, whereas Study 2 consisted of 263 adolescents (*M* age = 12.62 years) and their parents. Both studies utilized multi-method, multi-informant assessment batteries within a longitudinal design with three measurement occasions. Across both studies, lagged, autoregressive tests of the mediational paths revealed that interparental hostility was a significantly stronger predictor of the prospective cascade of children's insecurity and externalizing problems than interparental disengagement and low levels of interparental cooperation. Findings further indicated that interparental disengagement was a stronger predictor of the insecurity pathway than was low interparental cooperation for the sample of adolescents in Study 2. Results are discussed in relation to how they inform and advance developmental models of family risk.

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Keywords

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Children with externalizing difficulties characterized by conduct problems, aggression, and attention deficit-hyperactivity symptoms experience significant psychological burdens that carry substantial costs to society (Doshi et al., 2012; Foster, Jones, & the Conduct Problems Prevention Group, 2005). Research focused on identifying the family antecedents of these problems has shown that children's exposure to interparental conflict is a consistent precursor of their externalizing symptoms in childhood and adolescence (e.g., Buehler et al., 1997; 1998; Jouriles, Rosenfield, McDonald, & Mueller, 2014). According to family process models, children's vulnerability to interparental discord may be rooted in their exposure to three distinctive forms of conflict behaviors (e.g., emotional expressions, verbal content): hostility, disengagement, and uncooperativeness (Harold & Leve, 2012; Morris, Silk, Steinberg, Myers, & Robinson, 2007; Repetti, Robles, & Reynolds, 2011). Interparental hostility specifically consists of parental expressions of anger, frustration, and aggression during conflicts, whereas disengagement between parents is comprised of parental withdrawal, detachment, and avoidance behaviors. In contrast, low levels of warmth, support, and collaborative problem solving define uncooperative interparental conflicts. These family process models further posit that children's difficulties preserving their emotional security in the face of interparental conflict mediate associations between hostile, disengaged, and uncooperative forms of interparental conflict and their behavior problems.

The widespread conceptual emphasis placed on children's emotional insecurity as a mediator in the pathway between interparental conflict and children's behavior problems is originally rooted in emotional security theory (EST; Davies & Cummings, 1994). According to EST, destructive interparental conflict undermines children's ability to preserve their emotional security across a wide range of developmental periods spanning infancy through late adolescence. Difficulties achieving emotional security in the face of interparental conflict manifest in elevated fearful distress, avoidance, and negative representations of the consequences conflict has for family life. Children's insecurity, in turn, is proposed to lay the foundation for later behavior problems. In support of this hypothesis, studies have repeatedly identified children's insecurity as a mediator in prospective associations between interparental conflict and child externalizing problems (e.g., Buehler, Lange, & Franck, 2007; Cummings, Schermerhorn, Davies, Goeke-Morey, & Cummings, 2006; Kelly & El-Sheikh, 2013).

In an effort to distinguish between the specific forms of conflict outlined in the family process models, the reformulation of emotional security theory posits that interparental hostility, disengagement, and poor cooperation will vary systematically in their strength as predictors of children's insecurity (EST-R; Davies & Sturge-Apple, 2007). According to EST-R, the emotional security system developed over our evolutionary history to selectively respond to cues of interpersonal danger. As a result, interpersonal threat cues (e.g., angry faces, loud voices, aggression) assume primacy in organizing children's fearful responses in close-knit social contexts such as the family (Davies & Sturge-Apple, 2007; Öhman &

Mineka, 2001). Because diminished happiness, support, and problem solving are far less reliable as signals of danger in the absence of overt hostile threat cues, these parameters of uncooperative conflict are hypothesized to carry minimal weight in signifying threat and organizing children's insecure responses (Öhman & Mineka, 2001). Therefore, EST-R hypothesizes that hostile interparental conflict is a more consistent and powerful predictor of children's insecurity and psychological problems than are variations of interparental cooperation (Davies & Sturge-Apple, 2007).

As a further distinction, EST-R posits that interparental disengagement will be a modest predictor of children's insecurity, falling in between the hypothesized minimal impact of poor interparental cooperation and the potent risk of interparental hostility. On the one hand, disengagement may be a marker of interpersonal discord, struggle, and rejection within the social hierarchy (Gilbert, 2001). Therefore, by signalling the *potential* for threat, repeated exposure to disengagement may be more likely to undercut children's security in the interparental relationship than variations in uncooperative conflict (Dixon, 1998). On the other hand, withdrawal and disengagement are less reliable prognosticators of imminent social threat. Thus, hostile interparental conflict is theorized to represent more immediate signals of threat than disengaged conflict.

Research has yet to test whether unfolding mediational cascades involving interparental conflict, children's insecurity, and their behavioral problems vary depending on whether conflict is expressed through hostility, disengagement, or poor cooperation. Addressing this gap requires simultaneously examining interparental hostility, disengagement, and poor cooperation as predictors of children's insecurity. In contrast, most studies exploring multiple dimensions of interparental conflict have isolated the predictive power of forms of conflict in separate analytic models of emotional insecurity in samples of children ranging from 2- to 16-years-old (i.e., Cummings, Goeke-Morey, & Papp, 2004; Davies, Martin, & Cicchetti, 2012; Goeke-Morey, Cummings, & Papp, 2007; McCoy, Cummings, & Davies, 2009). Only one study has simultaneously examined the predictive roles of interparental conflict dimensions in models of security and adjustment that roughly correspond with the three conflict parameters outlined in EST-R (Du Rocher, Schudlich & Cummings, 2007). In a sample of 8- to 16-year-old children who differ from the children in the samples of the present paper, the study results indicated that depressive conflict tactics (i.e., sadness, withdrawal, fear, physical distress) were significantly related to children's insecurity. In contrast with EST-R's hypotheses, hostile and uncooperative conflict failed to explain any unique variance in children's insecurity.

However, these findings relied on cross-sectional data, and only longitudinal designs can directly test the hypothesized mediational paths. For example, family process models regard interparental conflict as a risk factor that gradually erodes children's adjustment by progressively setting in motion their pathogenic responses to family stress (Cummings & Davies, 2011; Morris et al., 2007; Repetti et al., 2011). Thus, security is proposed to develop over periods of months following exposure to interparental conflict and, in turn, broaden into psychological problems over an extended time period (Cummings & Miller-Graff, 2015; Davies, Martin, & Sturge-Apple 2016). Likewise, quantitative psychologists have demonstrated that cross-sectional tests of mediation produce substantially biased findings

(Cole & Maxwell, 2003; Maxwell & Cole, 2007; Preacher, 2015). The resulting conclusion is that "the bias inherent in cross-sectional designs has disastrous consequences for hypothesis tests" of mediation (Maxwell & Cole, 2007, p. 39).

The aim of this paper is to provide the first prospective test of the mediational pathways involving the three forms of interparental conflict, children's insecurity, and their externalizing problems. We report on the results from two data sets that are independent of the previously published paper on mediational links among forms of interparental conflict, children's insecurity, and their psychological adjustment (i.e., Du Rocher Schudlich & Cummings, 2007). Each study employed a longitudinal design with three annual measurement occasions. Thus, in accord with quantitative recommendations for testing mediation (e.g., Cole & Maxwell, 2003; Maxwell & Cole, 2007), we used repeated measures of insecurity and child adjustment problems to permit a full prospective analysis of change at each link in the mediational chain. In addition, the studies in this paper each used a multi-method, multi-informant measurement approach. Finally, as a step toward examining the generalizability and specificity of our hypotheses, we tested the mediational role of insecurity across two studies that varied in their developmental (i.e., preschool versus adolescent children) and socioeconomic (i.e., economically impoverished versus middle class sample) backgrounds.

Study 1

To test the EST-R hypotheses, we examined mediational pathways among the three forms of interparental conflict, children's insecurity, and their externalizing problems during the transition from the preschool to early school years. This developmental window has been posited to be a sensitive period for the operation of emotional security processes. For example, relative to their older counterparts, children in the early school years respond to adult conflicts with more fear, poorer perceived competence, and more limited coping strategies (e.g., Cummings, Vogel, Cummings, & El-Sheikh, 1989; El-Sheikh & Cummings, 1995; Grych, 1998). Developmental models have further postulated that advances in social perspective taking trigger an increase in children's concerns about the welfare of their parents and themselves within the broader family unit (Cicchetti, Cummings, Greenberg, & Marvin, 1990; Davies et al., 2016). As a first step toward understanding the hypothesized cascade of insecurity, we examined our research questions within a sample of families with preschool children who are at elevated risk for exhibiting psychopathology. Finally, we included family income, child gender, and maternal and paternal parenting quality as covariates in the analyses. We selected these factors based on empirical identification of: (a) parenting difficulties and economic impoverishment as predictors of children's insecurity and externalizing problems (e.g., Webster-Statton & Hammond, 1999; Sturge-Apple, Davies, Winter, Cummings, & Schermerhorn, 2008) and (b) child gender (i.e., boys) as a risk factor for externalizing difficulties (e.g., Campbell, Shaw, & Gilliom, 2000).

Methods

Participants—Participants included 243 families (i.e., mother, father, and preschool child) from a moderately sized metropolitan area who were recruited through multiple

agencies including local preschools, Head Start programs, Women, Infants, and Children (WIC) programs, and public and private daycare providers. The average age of children at Wave 1 was 4.60 years (SD = .44; range = 4 to 5 years old), with 56% of the sample consisting of girls. Almost half of the families were Black or African American (48%), followed by families who identified as White (43%), multi-racial (6%), or another race (3%). Approximately 16% of the family members identified as Latino. At Wave 1, 99% of the mothers and 74% of the fathers were biological parents. Median household income was $33,900 per year (range = $1,100 – $121,000), with most families (69%) receiving public assistance. Moreover, the median education for the sample consisted of a GED or high school diploma, and 19% of the parents did not earn a high school diploma or GED. Parents had lived together an average of 3.36 years. Approximately half of the adults (47%) were married. The longitudinal design consisted of three annual measurement occasions beginning when children were in their last year of preschool. Retention rates across contiguous waves of data collection were 97% and 94%. Comparisons of families lost to attrition and those who participated in all three waves along the thirteen family (e.g., forms of interparental conflict, parenting), child (e.g., insecurity responses, externalizing problems), and demographic (e.g., family income) variables included in the primary analyses only yielded one significant difference. Families participating in all waves evidenced significantly lower incomes than those who dropped from the study, d = .64.

Procedures—Families visited our research laboratory at each measurement occasion. All research procedures were approved by the Institutional Review Board prior to conducting the study. Families and teachers were compensated monetarily for their participation.

Interparental conflict task: Parents participated in an interparental conflict task in which they discussed common, problematic disagreements in their relationship for 10 minutes (Gordis, Margolin, & John, 2001). While the child was in a separate room, parents selected multiple issues to discuss so they could move on to another topic if they finished discussing a previous one during the task. Parents were free to discuss any problematic disagreement topic as long as they were both comfortable discussing it in front of their child. After parents selected the topic, an experimenter escorted the child into the room to play with a set of toys. Parents then engaged in the video-recorded interparental interaction after the experimenter left the room.

Interparental disagreement interview: At Wave 1, mothers completed the Interparental Disagreement Interview, a semi-structured, narrative interview designed to assess the frequency, nature, course, and aftermath of interparental conflicts witnessed by their children (e.g., Davies, Sturge-Apple, Cicchetti, Manning, & Vonhold, 2012). After selecting an interparental conflict topic that commonly takes place in front of the child, a trained interviewer presented mothers with a series of open-ended questions (e.g., "How would you describe your disagreements over [*topic*]?"; "How do you typically feel during these disagreements?"; "How does the disagreement end?"). Additional probes were used to maximize the richness of maternal narratives. Interviews were videotaped for later coding.

Questionnaire assessments: Mothers and fathers also completed survey measures of interparental conflict and demographic characteristics at Wave 1. During Waves 1 and 3, mothers and teachers reported on children's disruptive behavior problems.

Family interaction task: At Wave 1, mothers, fathers, and children participated in a 10-minute task in which they were asked to work together to build a model house using LEGO blocks (e.g., Schoppe, Mangelsdorf, & Frosch, 2001). Because the objective was to create a context that elicits child bids for parental support and assistance (McHale, Kuersten-Hogan, & Lauretti, 2001), the model house was selected so that children could not successfully build the house without parental assistance. Video records of the task were later coded for parenting.

Measures—We used a multi-method, multi-informant approach to obtain comprehensive measures of each form of interparental conflict. For comparability in assessment, interparental hostility, disengagement, and poor cooperation variables each consisted of mean composites of eight standardized assessments. Each form of conflict was specifically indexed by three observer ratings from the interparental conflict task, three parent report measures of interparental conflict, and two coder ratings from the interparental disagreement interview.

Hostile interparental conflict (Wave 1): For the observational component of the measurement battery, trained coders rated interparental hostility during the interparental conflict task using the Negative Escalation code from the System for Coding Interactions in Dyads (SCID; Malik & Lindahl, 2004) and the Anger code from the Interparental Conflict Expressions (ICE; e.g., Davies, Coe, Martin, Sturge-Apple, & Cummings, 2015; Davies & Sturge-Apple, 2013) Coding System. Rated along a five-point scale (1 = *Very low*; 5 = *High*) based on dyadic behavior, the SCID Negative Escalation code reflects the degree to which the couple reciprocates or escalates displays of anger, hostility, and negativity. The ICE Anger code indexes the intensity and frequency of facial expressions, verbalizations, and postural displays of anger by mothers and fathers separately in the interaction on a nine-point scale (1 = *Not at all characteristic*; 9 = *Mainly characteristic*). Interrater reliabilities, based on ICCs of independent ratings on 30% of the interactions, ranged from .80 to .84 across codes. The SCID is a well-established system for coding interparental conflict with strong psychometric properties (for details, see Lindahl, Malik, Kaczynski, & Simons, 2001). As an adaptation of the SCID, the ICE codes have evidenced predictive validity, as shown by their significant associations with children's emotional reactivity to interparental conflict, internalizing symptoms, and externalizing problems (Davies et al., 2015).

In the interview portion of the assessment, coders rated mother and father anger during conflicts from the interparental disagreement interview. Anger ratings, which ranged from 0 (*None*) to 6 (*High*), reflected the degree to which mothers and fathers exhibited signs of hostility, anger, and irritation. ICCs, indexing reliability between two raters who independently overlapped on 30% of the videos, were .87 for maternal Anger and .86 for partner Anger.

For the questionnaires, mothers and fathers both completed the Psychological Aggression Scale from the Conflict Tactics Scale (CTS-2; Straus, Hamby, Boney-McCoy, & Sugarman, 1996), while mothers also reported on the Negative Escalation scale from the Managing Affect and Disagreements Scale (MADS; Arellano & Markman, 1995). The CTS-2 Psychological Aggression scale is designed to assess verbal and psychological forms of interparental hostility, whereas the MADS Negative Escalation scale measures reciprocation of anger between parents. Internal consistencies ranged from .80 to .90 across the three questionnaire measures. The resulting eight measures were standardized and averaged into a composite of interparental hostility (α = .80).

Disengaged interparental conflict (Wave 1): In the observational part of the assessment, trained coders rated the interparental conflict task using the SCID Pursuit-Withdrawal Scale (Malik & Lindahl, 2004) and the Disengagement scale from the ICE (Davies & Sturge-Apple, 2013). The Disengagement code assesses maternal and paternal detachment, flat affect, unresponsiveness, and avoidance of conflict topics along a nine-point scale (1 = *Not at all Characteristic*; 9 =*Mainly Characteristic)*. The five-point Pursuit-Withdrawal scale (1 = *Very low*; 5 = *High*) is a dyadic code characterized by one partner persistently responding with detachment to the consistent demands of the other partner to engage in the conflict. ICCs assessing reliability based on coders' independent ratings of over 20% of the videos were .77 for maternal Disengagement, .72 for paternal Disengagement, and .56 for Pursuit-Withdrawal.

For the two interview assessments of the construct, trained coders rated maternal responses to the interparental disagreement interview for levels of maternal and paternal disengagement along seven-point scales (0= *None*; 6 = *High*). The Disengagement code reflects the extent to which each parent is detached during the conflicts (e.g., avoidance, leaves the room or house, sulks, becomes quiet). ICCs indexing interrater reliability among trained coders who overlapped on over 30% of the interviews were .85 and .88 for maternal and paternal Disengagement codes, respectively.

As the set of three survey assessments, mothers and fathers each completed the Stalemate scale from the Conflict and Problem-Solving Scales, and mothers also reported on the CPS Avoidance scale (CPS; Kerig, 1996). The 14-item Stalemate scale indexes interparental detachment (e.g., "Sulk, refuse to talk, give the silent treatment"), while the 16-item Avoidance scale assesses efforts to avoid or withdraw from interparental problems (e.g., "Leave the room"). Alpha coefficients ranged from .78 to .84 across the three measures. As with the interparental hostility composite, the multi-method, multi-informant scales were standardized and aggregated to form a single index of interparental disengagement (scale-level α = .68).

Uncooperative interparental conflict (Wave 1): The observational assessment from the interparental conflict task consisted of trained coder ratings of the interparental conflict task using the ICE Positive Affect scale for mothers and fathers separately and the SCID Cohesion code at the couple level (Davies & Sturge-Apple 2013; Malik & Lindahl, 2004). Rated on a nine-point scale (1 = *Not at all characteristic*; 9 = *Mainly characteristic*), the ICE Positive Affect code assesses maternal and paternal expressions of warmth through

verbalizations (e.g., cheerful tone of voice), facial expressions (e.g., smiling), and gestures (e.g., physical affection). The SCID Cohesion scale, which utilizes a five-point scale (e.g., 1 = *Very low*; 5 = *High*), assesses the degree of closeness, support, and connectedness between the parents. ICCs for interrater reliability based on over 20% of the interactions ranged from .80 to .87 across the three codes.

For the interview portion of the measurement battery, trained coders rated maternal and paternal contentment from the maternal interparental disagreement interview descriptions immediately following disagreements. Rated on a seven-point scale (0 = *None*; 6 = *High*), the Contentment code captures the extent to which each parent is happy, relaxed, and comfortable in the aftermath of the conflict. Thus, at high levels, the narrative portrays parents as experiencing intense positive affect and satisfaction. Interrater reliabilities, based on the two coders' ratings of over 30% of the interactions, were excellent (ICC = .92 for maternal and paternal contentment).

The three survey measures utilized to assess interparental uncooperativeness, included: (a) mother and father reports on the 12-item CPS Cooperation Scale (Kerig, 1996) and (b) mother reports on the MADS Editing Scale (Arellano & Markman, 1995). The CPS Cooperation scale assesses the degree to which parents work collaboratively to solve conflicts in mutually respectful ways (e.g., "try to find a solution that meets both needs equally"). The MADS Editing scale measures parental tendencies to respond positively to each other even during stressful times through listening skills and constructive framing of interactions (e.g., "I express appreciation for my partner's help despite his unsuccess"). Internal consistency coefficients were satisfactory for the three scales (i.e., each α = .89). To obtain an assessment of poor cooperation, all eight cooperation measures from the interparental conflict task, interparental disagreement interview, and questionnaires were reverse scored so that higher scores reflect greater uncooperative conflict. Each of these measures were standardized and averaged together into a single composite of uncooperative interparental conflict (α = .80).

Children's emotional insecurity (Waves 1 and 2): At the first two waves, trained raters coded children's behavioral reactivity to interparental conflict from the interparental conflict task along three established assessments of insecurity (Davies, Sturge-Apple, Winter, Cummings, & Farrell, 2006). Child reactivity ratings at Wave 2 were only included in analyses when the same parents from Wave 1 participated in the task at Wave 2. As a result, 20 children had missing data for these ratings. The three measures were specified as manifested indicators of a latent construct of insecurity at each wave. To assess the first indicator of emotional reactivity, coders rated children along two dimensions: Vigilance and Fearful Distress. Coded along a five-point scale (1 = *No vigilance*; 5 = *Intense vigilance*), signs of vigilance included carefully watching and listening to parents, substantially decreasing play activities due to preoccupation with the conflict, and verbal concern about the conflict. The second code consisted of a nine-point molar rating of Fearful Distress (1 = *Not at all characteristic*; 9 = *Mainly characteristic*), assessing the extent to which children displayed anxiety, tension, fear, worry, or emotional upset in facial (e.g., open mouth, staring wide-eyed), postural (e.g., freezing), or gestural (e.g., wringing hands) expressions. ICCs, indexing two independent coders' ratings of over 20% of the interactions at each wave,

ranged from .78 to .86 for the two codes across the waves. Ratings for each code were standardized and averaged together to create a composite of emotional reactivity at each wave. Internal consistencies for the composites were .84 at Wave 1 and .72 at Wave 2.

As the second indicator of insecurity, coders rated children's avoidance of interparental conflict along two scales: Avoidance and Submissive Disengagement. The five-point scale for Avoidance (1 = *No avoidance*; 5 = *Intense avoidance*) indexes the chronicity, quality, and intensity of child withdrawal behaviors during the interparental interaction (e.g., leaving the room, hiding one's face, making noise to tune out parents, minimizing verbal interactions with parents, turning away from parents). Submissive Disengagement, which was coded along a nine-point scale (1 = *Not at all characteristic*; 9 = *Mainly characteristic*), was defined as subtle, passive, anxious, and restrained forms of social distancing and withdrawal from the interaction (e.g., becoming quiet or withdrawn, avoiding eye contact, gingerly moving away from the interaction). As indices of inter-rater reliability, ICCs of the ratings of over 20% of the videos by two independent coders ranged from .76 to .93 across the two codes at each wave. In accord with the emotional reactivity measure, ratings for each code were standardized and averaged to create a composite of avoidance at each wave (composites *α*s were .79 at Wave 1 and .81 at Wave 2).

As the third indicator, coders assessed children along a molar scale of Security, ranging from 1 (*Not at all characteristic*) to 9 (*Mainly characteristic*). The Security code was defined by behaviors that are theorized to reflect children's confidence in parents to manage disputes in a way that maintains family harmony, including: negligible or mild levels of fearful distress and involvement in conflicts that are well-managed and followed by quick resumption of normal activities in the aftermath of parental anger. Trained coders independently rated over 20% of the videos to assess interrater reliability at each wave. ICCs were .89 at Wave 1 and .85 at Wave 2.

Child externalizing problems: At Waves 1 and 3, teachers and parents completed the respective Teacher and Parent versions of the MacArthur Health and Behavior Conduct Problems Subscale (HBQ; Ablow et al., 1999; 11 items; e.g., "Physically attacks people"). In addition, teachers completed the HBQ ADHD Symptoms scale to assess impulsivity, hyperactivity, and inattention (15 items; e.g., "Can't stay seated when required to do so"). Internal consistencies for the measures across the waves ranged from .89 to .95. The three scales were specified as manifest indicators of the latent construct of child externalizing problems at each wave.

Covariates: Maternal and paternal parenting quality: Quality of maternal and paternal parenting was assessed during the family interaction task using the Sensitivity and Warmth codes from the well-established Iowa Family Interaction Rating Scales (IFIRS; Melby & Conger, 2001). The IFIRS assesses the frequency and intensity of parent caregiving behaviors on a nine-point scale (1 = *Not at all characteristic*; 9 = *Mainly characteristic*). The Sensitivity scale assesses individual differences in parental awareness of their children's needs, emotional states, and abilities; the Warmth Scale indexes parental support and affection toward the child. To evaluate interrater reliabilities, a second coder independently rated 21% of the parent-child interactions. ICCs ranged from .90 to .95 across the four

codes. Because the ratings were assessed on the same scale, composites of maternal and paternal parenting quality were created by averaging Warmth and Sensitivity ratings for each parent (αs = .84 for mom; .92 for dad).

Covariates: Sociodemographic characteristics: Two demographic covariates derived from a Wave 1 maternal interview included (a) child gender and (b) annual household income.

Results and Discussion

Table 1 provides the means, standard deviations, and correlations among the primary variables and covariates. Comparisons of teacher reports of behavioral problems on the HBQ with comparable reports from a community sample of children from two US regions (i.e., Ablow et al., 1999) indicated that our sample evidenced conduct problems and ADHD symptoms that were, on average, 81% higher across the two waves. Percentages of children in our sample who exceeded the mean level of behavioral difficulties in a clinic-referred sample of young children in the Ablow et al. (1999) study ranged from 19% to 22% across the two teacher measures.

Structural equation modeling (SEM) with the Amos 22.0 statistical software program was used to examine children's emotional insecurity as a mediator of prospective associations among interparental hostility, disengagement, and poor cooperation and their externalizing problems. As shown in Figure 1, structural paths were specified between each predictor (i.e., interparental conflict forms and covariates) and the two endogenous variables of Wave 2 child insecurity and Wave 3 child externalizing problems. We also estimated a structural path between Wave 1 externalizing problems and Wave 2 emotional insecurity (see Figure 1). As a test of the second link in the mediational model, Wave 2 insecurity, in turn, was specified as a predictor of Wave 3 externalizing problems. Autoregressive paths using Wave 1 insecurity and externalizing problems as predictors were included in the analysis. In accord with strong factorial approaches for maximizing measurement equivalence for repeated measures of child functioning (Widaman, Ferrer, & Conger, 2010), the following constraints were placed on the latent endogenous constructs: (1) factor loadings of the indicators of insecurity and externalizing difficulties were constrained to be equal across time and (2) intercepts of the same indicators were fixed to be invariant across time. Finally, correlations were specified among all Wave 1 (i.e., covariates and predictors) variables in the model and between error terms of comparable manifest indicators of insecurity and externalizing problems across the waves. SEM analyses used full-information maximum likelihood (FIML) to estimate missing data (i.e., data were missing for 10.9% of the values) and retain the full sample for primary analyses (Enders, 2001).

The resulting model depicted in Figure 1 provided a good representation of the data, χ^2 (109, $N = 243$) = 163.52, $p = .001$, $RMSEA = .05$, $CFI = 0.95$, and χ^2/df ratio = 1.50. For clarity, the correlations among covariates and predictors (see Table 1 for correlations among the measures) are not displayed in the Figure. In support of the measurement model, the standardized loadings of the manifest indicators onto their latent constructs were all significant ($p < .001$) and generally moderate to high in magnitude (mean absolute value for

loadings = .65). Moderate autoregressive paths were identified for children's insecurity over a one-year period, $\beta = .27$, $p < .01$, and their externalizing difficulties across a two-year span, $\beta = .47$, $p < .001$. With the inclusion of the autoregressive paths, none of the covariates were significant predictors of W2 child insecurity or W3 externalizing problems. Consistent with hypotheses, Wave 1 interparental hostility significantly predicted children's greater emotional insecurity over a one-year period, $\beta = .34$, $p < .01$. Children's insecurity at Wave 2, in turn, predicted child behavior problems at Wave 3, $\beta = .21$, $p < .05$. As a further test of mediation, we conducted bootstrapping tests for the indirect effect (Preacher & Hayes, 2008). In support of mediation, the results indicated that the indirect path involving Wave 1 interparental hostility, Wave 2 emotional insecurity, and Wave 3 child externalizing problems was significantly different from zero, with the unstandardized coefficient for the indirect path = .36, 95% CI [.05, .80].

In contrast to the significant findings for interparental hostility, uncooperative and disengaged forms of conflict were unrelated to child insecurity at Wave 2. As a direct test of the salience of interparental hostility in predicting insecurity, we conducted pairwise parameter comparisons comparing the magnitude of associations between the three forms of interparental conflict and child insecurity. One-tailed tests were used to compare the relative strength of the links based on the EST-R prediction that interparental hostility would be the strongest predictor of insecurity. Supporting the hypotheses, results indicated that Wave 1 interparental hostility was a significantly stronger predictor of Wave 2 child insecurity than interparental disengagement, $z = 2.05$, $p < .05$, and poor interparental cooperation, $z = 1.91$, $p < .05$.

Study 2

In Study 2, our goal was to further test interparental hostility, disengagement, and uncooperativeness as unique predictors of children's insecurity and externalizing problems in a sample of young adolescents. Based on the Study 1 results and EST-R predictions, we hypothesized that interparental hostility would more strongly predict insecurity than interparental disengagement and poor cooperation. The null associations between disengaged and uncooperative forms of conflict and children's insecurity in Study 1 did not support EST-R's hypothesis that disengagement between parents would fall in between hostile and uncooperative interparental conflict in its strength as a precursor of security. However, from a developmental perspective, it is possible that disengaged interparental conflict only emerges as a threat to children's insecurity as they make further gains in processing interpersonal emotions and interactions. In this regard, research has shown that young adolescents exhibit greater acuity than younger children in discriminating between interparental conflict tactics and draw more systematic causal connections between social events and their impact on future interpersonal relations (e.g., Cummings, Ballard, El-Sheikh, & Lake, 1991; El-Sheikh & Cummings, 1995). Therefore, due to their greater sensitivity to subtle forms of interpersonal threat, we hypothesized that interparental disengagement would emerge as a stronger predictor of insecurity than poor interparental cooperation during early adolescence.

In addition, developmental psychopathology models underscore the importance of identifying risk processes across normative as well as atypical conditions (e.g., Cicchetti & Toth, 2009). Therefore, our aim in Study 2 was to test whether the pathogenic cascade of insecurity identified in the at-risk sample in Study 1 was similar in a more advantaged sample. We specifically sought to examine mediational pathways involving the three forms of interparental conflict, child insecurity, and their externalizing difficulties in a community sample of adolescents who, on average, experienced relatively low levels of adversity. To maximize the comparability of the assessment batteries, design, and analysis of the two studies, we made efforts to maintain some correspondence in measures across the studies. Therefore, Study 2 made use of similar: (a) interparental hostility, disengagement, and poor cooperation composites derived from observational ratings, a semi-structured interview, and parental questionnaire ratings, (b) teacher and maternal assessments of disruptive behavior, (c) signs of emotional insecurity (e.g., emotional reactivity, avoidance), and (d) covariates (i.e., maternal and paternal parenting quality, household income, and child gender). As in Study 1, we employed the same lagged autoregressive approach to testing the mediational pathways over time.

Methods

Participants—Data for this paper were drawn from a study with 280 mothers, fathers, and adolescents. Participants were recruited through local school districts and community centers in a Northeastern metropolitan area and a small Midwestern city. Due to our focus on examining children's responses to interparental conflict, families were only included in this study if the mothers, fathers, and adolescents had regular contact with each other (i.e., contact as a triad for an average of 2 to 3 days per week during the year). As a result, 17 families were excluded from this paper, yielding a sample of 263 mothers, fathers, and adolescents. Most adolescents were White (74%), followed by smaller percentages of African-American (17%), multi-racial (8%), and other racial (1%) backgrounds. Approximately 4% of the adolescents identified as Latino. Most adolescents lived with their biological mothers (93%) and fathers (79%), with the remainder living with adoptive parents, stepparents, or adult guardians. The longitudinal design of the study consisted of three annual measurement occasions. Retention rates across contiguous waves were 92% and 94%. The average age of adolescents at Wave 1 was 12.62 years ($SD = .57$; age range = 11 to 14 years old), with 50% of the sample consisting of girls. Median household income of the families was between $55,000 and $74,999 per year. Mothers and fathers reported median education levels of some college education. Most parents (i.e., 89%) were married at the outset of the study. Comparisons of families lost to attrition with those who remained in the study at the third wave yielded no statistical differences across the thirteen family (e.g., interparental conflict, parenting), child (e.g., insecurity, externalizing problems), and demographic variables at Wave 1.

Procedures—Families visited the laboratory at one of two sites at each time point. The Institutional Review Boards at each research site approved all research procedures. Families and teachers were compensated monetarily for their participation.

Interparental conflict task: During Wave 1, mothers and fathers participated in an interparental conflict task in which they were asked to engage in a disagreement (Du Rocher Schudlich, & Cummings, 2007). Parents conferred to select two problematic topics for their relationship that they were comfortable discussing. The couples then discussed the two topics for a total of fourteen minutes. The task was video recorded for subsequent coding.

Interparental disagreement interview: At Wave 1, mothers completed the same interview used in Study 1. The interview was video recorded for later coding.

Questionnaire assessments: Mothers and fathers filled out surveys of interparental conflict and demographic characteristics at Wave 1. During Waves 1 and 3, teachers and mothers completed questionnaires to assess adolescent problem behaviors. Finally, teens completed a survey to assess their emotional insecurity in the interparental relationship at Waves 1 and 2.

Family problem-solving task: At Wave 1, mothers, fathers, and adolescents participated in a family problem-solving task in which they were asked to select and discuss a topic of frequent family disagreement for seven minutes with the goal of coming to a resolution (Gordis, Margolin, & John, 2001). Families were instructed to choose a topic that they felt comfortable discussing and to talk about the topic as they normally would at home. The interactions were video recorded for subsequent coding of maternal and paternal parenting behaviors.

Measures—Consistent with Study 1, we used a multi-method, multi-informant approach to assess interparental hostility, disengagement, and poor cooperation. Thus, for each form of conflict, we created a composite of six standardized assessments that consisted of two observer ratings from the interparental conflict task, two parent (i.e., mother and father) report measures of interparental conflict, and two coder ratings from the interparental disagreement interview.

Hostile interparental conflict: For the observational part of the interparental hostility measurement battery, trained coders separately rated maternal and paternal hostility in the interparental interaction task using the Negativity and Conflict code from the SCID (Malik & Lindahl, 2004). Negativity and Conflict reflected the degree to which each individual in the dyad displayed anger, frustration, and tension, as indexed by a five-point rating scale (1 = *Very Low*; 5 = *High*). Interrater reliabilities, based on ICCs of coders' independent ratings on at least 20% of the interactions, were .87 for mothers and .86 for fathers. For the interparental disagreement interview part of the measurement, another set of trained observers rated the levels of mother and father anger using the same Anger rating scale from Study 1. ICCs, assessing reliability between two raters who independently overlapped on 25% of the videos, were .81 and .88 for maternal and partner Anger, respectively. Finally, mothers and fathers each completed the 10-item O'Leary Porter Scale to assess children's exposure to interparental hostility (OPS; Porter, & O'Leary, 1980; e.g., "How often do you and/or your partner display verbal hostility [raised voices, etc.] in front of your child?"). Internal consistencies for the maternal and paternal OPS assessments were .78 and .80,

respectively. The resulting six scales were standardized and averaged together into a composite of hostile interparental conflict (α = .68).

Disengaged interparental conflict: For the observational assessment of the interparental conflict task, trained coders rated mothers and fathers separately along the SCID Withdrawal scale. The Withdrawal code is characterized by displays of detachment, avoidance of conflict topics, unresponsiveness, and flat affect, with ratings ranging from 1 (*Very low*) to 5 (*High*). ICCs assessing reliability based on coders' independent ratings of 20% of the interactions were .85 and .86 for mother and partner withdrawal, respectively. For maternal responses on the interparental disagreement interview, trained coders rated maternal and paternal conflict responses separately using the same Disengagement scale from Study 1. ICCs indexing interrater reliability of trained coders on over 25% of the videos were .75 and .74 for maternal and paternal Disengagement ratings. For the final measures, mothers and fathers completed the CPS Stalemate scale (αs = .80 and .81 for mom and dad reports) used in Study 1 (Kerig, 1996). As with the interparental hostility measure, the six multi-method scales were standardized and aggregated into an interparental disengagement composite (α = .65).

Uncooperative interparental conflict: The uncooperative conflict assessment followed the same multi-method and multi-informant approach as the other forms of interparental conflict. First, the observational assessment consisted of trained coder ratings on the SCID Positive Affect scale during the interparental conflict task. Rated on a five-point scale (e.g., 1 = *Very Low*; 5 = *High*), the SCID Positive Affect code is defined by positive, warm displays reflected in tone of voice (e.g., cheerful, satisfied), behaviors (e.g., affection, laughter), and facial expressions (e.g., genuine smiles). Independent coder ratings of 20% of the interactions yielded adequate interrater reliabilities for maternal (ICC = .90) and paternal (ICC = .91) positive affect. Second, coders rated maternal and paternal behavior from the interparental disagreement interview using the Contentment code from Study 1. ICCs of independent coder ratings on over 25% of the interviews were .92 for maternal contentment and .87 for paternal contentment. Third, mothers and fathers also independently completed the CPS Cooperation subscale used in Study 1 (Kerig, 1996). Internal consistency coefficients for the subscales were .87 for father reports and .86 for mother reports. Consistent with data reduction for the other conflict dimensions, the six assessments of cooperation were reserve-scored, standardized, and averaged together into a composite of poor interparental cooperation (α = .70).

Adolescent insecurity in the interparental relationship: In contrast to the younger children who participated Study 1, studies have shown that adolescents provide reliable and valid reports of their own emotional insecurity, including indices of fearful distress (e.g., emotional reactivity, avoidance) as well as appraisals of the meaning interparental conflict has for their families and themselves (Davies et al., 2002). As a result, adolescents completed three scales derived from the Security in Interparental Subsystem (SIS) Scales to assess their emotional insecurity at Waves 1 and 2 (Davies et al., 2002): (1) the Emotional Reactivity scale, which assesses multiple prolonged fearful distress reactions to conflict (e.g., nine items; "When my parents argue, I feel scared"), (2) the Avoidance scale, indexing

children's efforts to reduce their exposure to interparental conflicts (e.g., seven items; "When my parents have an argument, I try to be very quiet"), and (3) the Destructive Family Representations scale, which assesses negative appraisals of the impact of interparental conflict for the family (e.g., four items; "When my parents have an argument, I wonder if they will divorce or separate"). Alpha coefficients ranged from .83 to .89 for the three scales across Waves 1 and 2. The validity of the SIS scales is supported by previous research (e.g., Davies et al., 2002, 2014).

Adolescent externalizing problems: At Waves 1 and 3, teachers completed the Conduct Problems (e.g., "often fights with other children") and Hyperactivity/Inattention ("restless, overactive, cannot stay still for long") Scales from the Strength and Difficulties Questionnaire (SDQ; Goodman, 2001). To obtain multiple informant reports, mothers also completed the Delinquent Behavior Scale from the Child Behavior Checklist (Achenbach, 1991). Alpha coefficients for the three scales at each wave ranged from .67 to .82, and their psychometric properties are well established (Achenbach et al., 2003; Goodman & Scott, 1999).

Covariates: Maternal and paternal parenting quality: Maternal and paternal parenting quality during the family problem-solving task at Wave 1 was rated using the IFIRS Relationship Quality and Inductive Reasoning scales (Melby & Conger, 2001). Each code is rated on a nine-point scale (1 = *Not at all characteristic*; 9 = *Mainly characteristic*). Whereas high scores on the Relationship Quality code reflect warm and comfortable interactions between parents and children, low relationship quality reflects unhappy, distressing, and dissatisfying interactions. The Inductive Reasoning code assesses the degree to which the parent sensitively structures interactions and explanations in ways that facilitates teens to consider the consequences of their own behavior and the feelings and perspectives of others. To assess interrater reliability, coders independently rated over 20% of the interactions. ICCs ranged from .77 to .92 for maternal and paternal ratings of Relationship Quality and Inductive Reasoning. Because the codes were assessed on the same scales, the two parenting measures were averaged together for each parent to form composites of maternal and paternal parenting quality (α = .64 and .63, respectively).

Covariates: Sociodemographic characteristics: Two covariates were derived from parent reports of demographic characteristics: (1) children's gender (1 = boys; 2 = girls) and (2) annual family income based on a 13-point ordinal scale ranging from 1 (< *$6,000*) to 13 (*$125,000*).

Results and Discussion

Table 2 provides the means, standard deviations, and correlations among the covariates, interparental conflict characteristics, adolescents' insecurity, and externalizing difficulties. Consistent with Study 1, SEM analyses were conducted with the Amos 22.0 statistical software program to examine the mediational role of children's emotional insecurity in the prospective pathways between the three forms of interparental conflict and externalizing difficulties. Analyses utilized FIML to estimate missing data (i.e., data were missing for 13.0% of the values) and retain the full sample for primary analyses (Enders, 2001).

Following the same analytic approach as Study 1, the three interparental conflict characteristics and four covariates were specified as primary predictors of teens' emotional insecurity at Wave 2 and their externalizing difficulties at Wave 3 (see Figure 2). An additional structural path was estimated between Wave 2 insecurity and Wave 3 externalizing difficulties to test the second link in the mediational chain. Autoregressive paths at Wave 1 were also included for adolescent insecurity and externalizing problems to control for stability in the proposed mediator and outcome. Figure 2 also shows that we included predictive paths among all four Wave 1 covariates and adolescent insecurity at Wave 2 and their externalizing problems at Wave 3. As an additional covariate, a structural path was also estimated between adolescent externalizing problems at Wave 1 and their insecurity at Wave 2. As with Study 1, we implemented strong factorial invariance constraints for emotional security and externalizing problem constructs to attain correspondence in the measurement of constructs across time (Widaman et al., 2010). Correlations were further specified among all Wave 1 variables (i.e., covariates and predictors) in the model and between error terms of the manifest indicators for insecurity and externalizing problems across the assessment waves.

The model, which is depicted in Figure 2, fit the data well, χ^2 (109, $N = 263$) = 154.96, $p < .01$, $RMSEA = .04$, $CFI = .97$, and χ^2/df ratio = 1.42. For clarity, correlations are not displayed in the figure. Standardized loadings of the manifest indicators onto their latent constructs were all significant ($p < .001$) and generally high in magnitude (mean loading = .73). Autoregressive paths were significant for teen insecurity, $\beta = .47$, $p < .001$, and their externalizing problems, $\beta = .79$, $p < .001$. None of the Wave 1 covariates were significant predictors of adolescent insecurity or their externalizing problems. In testing the first link in the proposed mediational model, adolescent insecurity at Wave 2 was predicted by higher levels of interparental hostility, $\beta = .38$, $p < .001$, and disengagement, $\beta = .16$, $p = .05$, at Wave 1. Higher insecurity, in turn, was associated with more externalizing difficulties at Wave 3, $\beta = .21$, $p = .01$. In further support of mediation, bootstrapping analyses of the indirect links involving the two forms of interparental conflict, insecurity, and externalizing problems were significantly different from 0 for (a) hostile conflict: unstandardized coefficient = .13, 95% CI [.03, .25] and (b) disengaged conflict: unstandardized coefficient = .05, 95% CI [.001, .13] (Preacher & Hayes, 2008).

Although Wave 1 poor interparental cooperation predicted greater teen externalizing problems at Wave 3, $\beta = .19$, $p < .05$, it also was related to lower rather than higher insecurity at Wave 2, $\beta = -.21$, $p < .05$. Given that the correlations between poor interparental cooperation and the Wave 2 insecurity indicators were all significant and in the expected (i.e., negative) direction (see Table 2), we examined whether the counterintuitive finding resulted from multicollinearity. However, variance inflation factor (VIF) values for poor interparental cooperation with each of the covariates and other predictors in the model ranged from 1.07 to 2.42, all falling below even conservative standards (i.e., 2.50) for problematic levels of multicollinearity (Allison, 1999). Next, we examined if the negative links between uncooperative conflict and insecurity were the result of the variance it shared with the other forms of conflict. Therefore, we re-ran the model in Figure 1 after eliminating interparental hostility and disengagement from the analysis. The results indicated that the sign of the structural path between Wave 1 uncooperative conflict and Wave 2 insecurity

changed to the expected direction ($\beta = .11$, $p = .15$) after excluding the other conflict forms. Thus, the unexpected finding could not be reproduced in follow-up analyses.

Consistent with Study 1, we calculated pairwise parameter comparisons to test whether the prospective association between interparental conflict and teen insecurity varied significantly as a function of the form of conflict. One-tailed tests were used in the statistical comparisons. As hypothesized, interparental hostility predicted insecurity more strongly than interparental cooperation, $z = 4.18$, $p < .001$, and disengagement, $z = 1.74$, $p < .05$. In further supporting predictions, interparental disengagement was a stronger predictor of insecurity than uncooperative interparental conflict, $z = 2.67$, $p < .01$.

General Discussion

Multiple models of risky family processes have highlighted the importance of examining children's emotional insecurity as a mediating mechanism in associations among interparental hostility, disengagement, and poor cooperation and children's psychopathology (Harold & Leve, 2012; Macfie, Brumariu, & Lyons-Ruth, 2015; Morris et al., 2007; Repetti et al., 2011). However, research has yet to examine the relative roles of the three forms of interparental conflict as predictors of mediational paths involving children's insecurity and psychopathology. Simultaneous inclusion of interparental hostility, disengagement, and poor cooperation in the analyses of both of our studies consistently indicated that interparental hostility was a significantly stronger predictor of the cascade of children's insecurity and behavior problems in comparison with interparental disengagement and uncooperativeness. Thus, these findings are consistent with the EST-R hypothesis that children's insecurity is more likely to develop from earlier histories of interparental hostility than from prior experiences with disengaged or uncooperative conflict (Davies et al., 2016). According to EST-R, the emotional security system is selectively designed to contend with threat in interpersonal contexts. As a result, the security system itself should be most sensitive to imminent danger cues characterized by anger, yelling, dominant posturing, and aggression in the interparental relationship. At a broader level, our empirical findings also correspond with evidence that children are biologically prone to prioritize detecting and responding to anger displays over other emotions (e.g., LoBue, 2009; Öhman & Mineka, 2001). For example, LoBue (2009) showed that young children and adults are biased toward rapid identification and processing of angry facial cues over happy or sad facial cues.

According to EST-R, interparental disengagement should also be a stronger predictor of children's insecurity and, in turn, their adjustment than variations in exposure to interparental cooperation. Results from our two studies yielded partial support for this hypothesis. Study 1 results indicated that mediational paths involving interparental uncooperativeness and disengagement, child insecurity, and externalizing problems were negligible in the early school years. However, Study 2 findings revealed that interparental disengagement more strongly predicted mediational pathways involving adolescent insecurity and behavior problems than did poor interparental cooperation. Thus, both studies indicated that variability in cooperation, in and of itself, is unlikely to be a dependable sign of threat. Moreover, the more modest and inconsistent role of interparental disengagement as a predictor of insecurity across the two studies is broadly consistent with the hypothesis that

it is a less reliable prognosticator of imminent interpersonal threat than interparental hostility (Davies et al., 2016; Dixon, 1998; Gilbert, 2001; LoBue, 2009).

Although definitive explanations for our findings will require additional research, the results beg the question of why the potency of interparental disengagement as a precursor of the insecurity cascades differs across the studies. From a developmental perspective, it is possible that age moderates the mediational pathway between interparental disengagement, children's insecurity, and their externalizing problems. Early adolescence may usher in a number of developmental processes that heighten children's sensitivity to interparental disengagement (Cummings, Schermerhorn, Davies, Goeke-Morey, & Cummings, 2006). Some evidence suggests that adolescents may be more proficient in identifying subtle expressions of interparental discord (e.g., disengagement, withdrawal) than their younger counterparts (e.g., Cummings, Ballard, El-Sheikh, & Lake, 1991; El-Sheikh & Cummings, 1995). Research has also highlighted the disproportionate risk for relationship instability and dissolution following histories of apathy, helplessness, and detachment between parents (e.g., Christensen & Heavey, 1990; Gottman, 1993). Thus, by virtue of their increasing sensitivity to interparental interactions, adolescents may be better able to recognize the insidious repercussions of disengagement for the family and themselves. Furthermore, adolescents' greater tendencies to become involved in interparental disagreements may further sensitize them to subtler forms (i.e., disengagement) of interparental discord (e.g., Buchanan, Maccoby, & Dornbusch, 1991; Cummings et al., 1991). Because both parents and children report that the effectiveness of children's efforts to mediate interparental conflicts diminishes substantially from childhood into adolescence (Covell & Miles, 1992), heightened involvement in conflicts may do little more than embroil adolescents in cold, detached interactions between parents and, in the process, increase their insecurity.

However, study differences in interparental disengagement as a precursor of insecurity may also be due to methodological variations across the studies. Although research has shown that emotional insecurity operates similarly as a mediator of destructive interparental conflict for children from a wide array of demographic backgrounds (Davies et al., 2016), it is still possible that the lower SES levels and proportions of married families in Study 1 diluted the risk associated with interparental disengagement. Likewise, although we attempted to maximize consistency in the measurement of many of the primary constructs (e.g., interparental conflict), the design (e.g., three annual waves of data), and the analyses (e.g., autoregressive design, inclusion of similar covariates), assessments of insecurity differed across the studies due to the age differences of the children. Following previous recommendations for assessing security at different ages (Davies et al., 2006), we relied on behavioral indicators (e.g., emotional reactivity, avoidance) to assess young children's insecurity in Study 1 and adolescent reports of their insecurity (e.g., emotional reactivity, avoidance) in Study 2.

Given our empirical identification of children's emotional insecurity as a consistent predictor of their externalizing symptoms in both childhood and adolescence, it is also important to consider the question of how this pathogenic process unfolds. More specifically, why does insecurity, which is rooted in fear and anxiety, increase children's vulnerability to disruptive behavior problems? One possibility is that children high in

emotional insecurity may adopt their highly defensive ways of defending against interparental conflict as blueprints for interpreting and responding to new or challenging social contexts outside of the interparental relationship (Johnston, Roseby, & Kuehnle, 2009). For example, hostile processing of stressful peer events has been shown to mediate the association between children's insecurity in the interparental subsystem and school maladjustment (e.g., uncooperative behavior, attention problems) over a one-year period (Bascoe, Davies, Sturge-Apple, & Cummings, 2009). It is also possible that prolonged concerns about insecurity in the interparental relationship may increase children's behavior problems by undermining their abilities to master approach-oriented goals (Davies et al., 2016). Supporting this hypothesis, insecurity has been shown to increase children's vulnerability to externalizing problems through its association with impairments in exploration and problem solving during play and cognitive tasks (e.g., Davies, Manning, & Cicchetti, 2013).

Further discussion of the limitations of our paper is also necessary to fully interpret the findings. First, more research is needed to identify why the studies yielded different results for interparental disengagement as a predictor. Second, despite fairly wide diversity in the racial and demographic backgrounds of families in the paper, caution should be exercised in generalizing the findings to high-risk or clinical samples of children. Third, even with the inclusion of a number of predictors and covariates in the analyses, our longitudinal designs do not rule out all potential confounding variables (e.g., genetic mechanisms, temperament). Fourth, based on prior work, we did not expect that interparental uncooperativeness in Study 2 would predict lower child insecurity in the context of interparental hostility and disengagement. Given that this finding was not reproduced in any of our other analyses (i.e., Study 1 results, Study 2 correlations and models excluding the other forms of conflict as predictors), any definitive conclusions about this result will require further research. Finally, our identification of the modest to negligible roles of interparental disengagement and uncooperativeness as sources of children's insecurity should not be misinterpreted as evidence that they have no significant health implications for children or families. Although EST-R hypothesizes that child concerns about security hinge heavily on experiential histories with interparental hostility, it also proposes that other forms of interparental conflict (e.g., disengagement, minimal cooperation) increase children's risk for psychological difficulties through other mechanisms. For example, interparental disengagement and poor cooperation may increase psychopathology by undermining parenting practices and children's approach-oriented (e.g., social affiliation, exploration) goals (Davies et al., 2013; McCoy, George, Cummings, & Davies, 2013). Supporting this possibility, uncooperative interparental conflict in Study 2 did significantly predict higher levels of teen externalizing symptoms over time.

In closing, this paper was designed to break new ground by testing the relative strength of mediational pathways involving hostile, disengaged, and uncooperative forms of interparental conflict, children's emotional insecurity, and their externalizing problems across two multi-method longitudinal studies. The results highlight the value of distinguishing between different forms of interparental conflict in understanding differences in developmental pathways of children's coping and psychopathology. From a clinical perspective, the findings may also have important translational implications for alleviating

the burden of child psychopathology. Children's concerns about safety are commonly viewed as targets of change allaying their anxiety and depressive symptoms. However, our mediational findings suggest that adding security modules to prevailing behavioral approaches for treating externalizing problems may also reduce children's disruptive behaviors (e.g., parenting training or cognitive-behavioral programs; Lochman, Powell, Boxmeyer, & Carnargo, 2011; Menting, de Castro, & Matthys, 2013). Given the growing number of treatment programs that emphasize promoting child security in the family (e.g., Coatsworth, 2013; Cummings & Schatz, 2012; Johnston et al., 2009; Lieberman, Van Horn, & Ippen, 2005), the present results also underscore the potential merits of prioritizing clinical changes in specific forms of interparental conflict as a way of stopping the pathogenic cascade of insecurity in the development of behavior problems. Thus, reducing interparental hostility and, to a lesser degree, interparental disengagement may be regarded as a stronger clinical priority than enhancing interparental cooperation for alleviating children's safety concerns in the family and their disruptive problems (Coatsworth, 2013).

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General Scientific Summary

Although there has been a longstanding interest in understanding how children's sense of insecurity in the family plays a role in explaining why exposure to interparental conflict increases their vulnerability to behavior problems, little is known about how specific forms of conflict between parents serve as unique antecedents of their psychological difficulties. In two studies, we found that interparental hostility more strongly predicted children's insecurity and, in turn, their behavior problems than interparental disengagement or poor cooperation. For the sample of adolescents in Study 2, interparental disengagement was also a stronger precursor of their insecurity and ultimately their externalizing problems than was poor cooperation between parents.

Figure 1.
An autoregressive structural equation model examining children's emotional insecurity as a mediator in prospective pathways between interparental hostility, disengagement, and poor cooperation and their externalizing difficulties in Study 1. Tch. = Teacher; Cond. = Conduct Problems Sale; Em. React. = Emotional Reactivity. * *p* < .05 for structural paths in the figure.
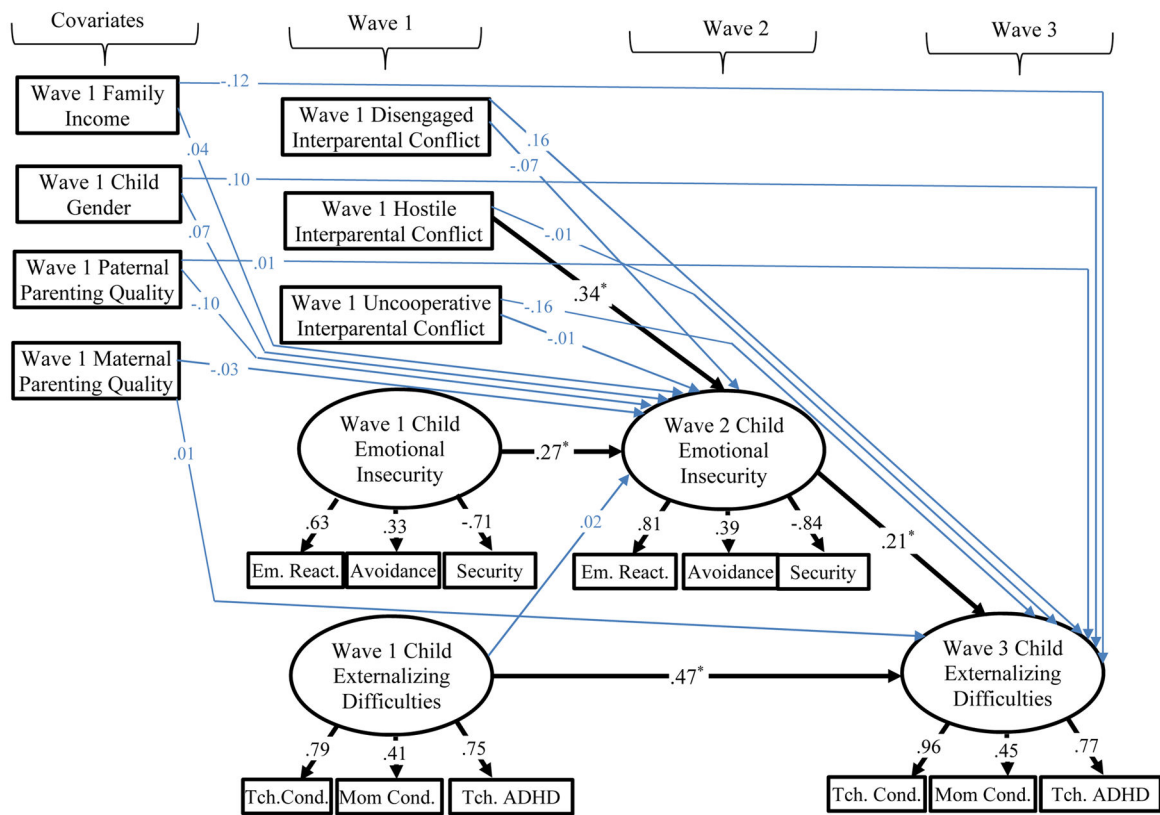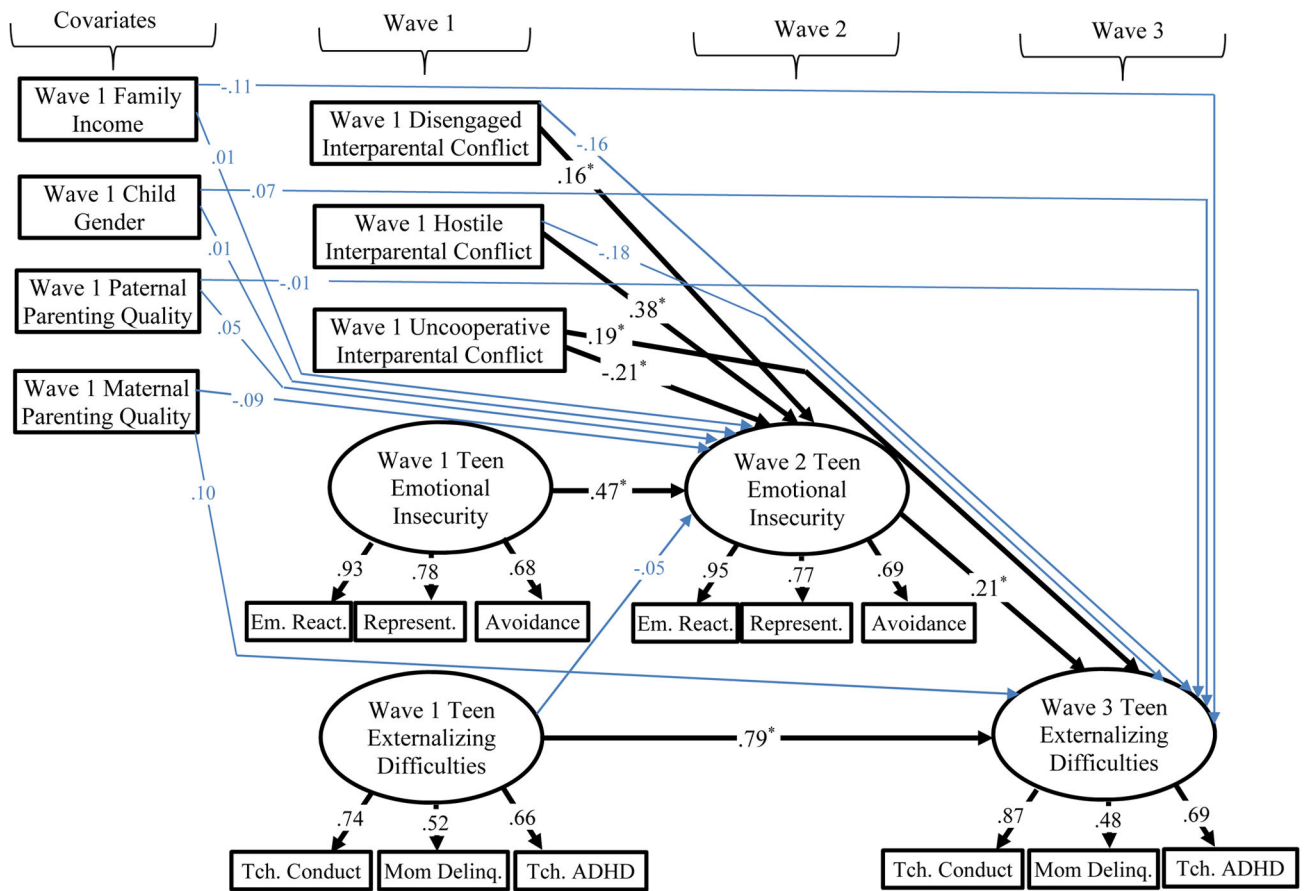
Figure 2.
An autoregressive structural equation model examining adolescent emotional insecurity as a mediator in prospective pathways between interparental hostility, disengagement, and poor cooperation and their externalizing difficulties in Study 2. Tch. = teacher; Conduct = Conduct Problems; Delinq = Delinquency. * *p* < .05 for structural paths in the figure.

Table 1

Means, Standard deviations, and Correlations for the Primary Variables in the Study 1 Analyses.

	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Wave 1 Covariates																				
1. Child Gender	1.44	0.50	--																	
2. Family Income (thousands)	41.51	23.54	.07	--																
3. Maternal Parenting Quality	3.84	1.78	−.06	.38*	--															
4. Paternal Parenting Quality	3.57	1.89	−.01	.39*	.38*	--														
Wave 1 Interparental Conflict																				
5. Hostile	0.00	0.65	.01	−.17*	−.14*	−.12	--													
6. Disengaged	0.00	0.56	−.04	−.30*	−.27*	−.18*	.70*	--												
7. Uncooperative	0.00	0.59	.01	−.09	−.16*	−.19*	.62*	.60*	--											
Wave 1 Child Emotional Security																				
8. Emotional Reactivity	0.00	0.93	−.09	−.09	−.14*	−.02	.16*	.14*	.06	--										
9. Avoidance	0.00	0.91	.02	−.15*	−.25*	−.13*	.22*	.25*	.10	.20*	--									
10. Overall Security	5.31	1.96	.03	.05	.03	.06	−.12	−.09	−.10	−.45*	−.29*	--								
Wave 2 Child Emotional Security																				
11. Emotional Reactivity	0.00	0.89	−.03	−.07	−.17*	−.14*	.28*	.15*	.15*	.28*	.11	−.15*	--							
12. Avoidance	0.00	0.92	.08	−.03	−.24*	−.13	.19*	.22*	.17*	.07	.39*	−.11	.28*	--						
13. Overall Security	4.96	2.05	.01	.15*	.15*	.17*	−.33*	−.23*	−.20*	−.21*	−.13	.27*	−.68*	−.30*	--					
Wave 1 Child Externalizing Problems																				
14. Conduct Problems (Teacher)	1.54	3.40	.12	−.07	−.09	−.08	.04	.03	.11	−.05	−.01	.01	.02	.07	−.03	--				
15. ADHD Symptoms (Teacher)	6.46	6.66	.08	−.12	−.09	−.22*	.03	−.06	.09	−.10	−.09	−.02	.02	.10	.00	.63*	--			
16. Conduct Problems (Mother)	1.77	2.26	.10	−.11	−.08	−.04	.19*	.18*	.15*	.11	.13*	−.12	.14	.16*	−.16*	.31*	.25*	--		
Wave 3 Child Externalizing Problems																				
17. Conduct Problems (Teacher)	1.75	3.31	−.02	−.27*	−.21*	−.23*	.12	.15*	.09	.10	.13	−.18*	.28*	.02	−.22*	.38*	.25*	.36*	--	

	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
18. ADHD Symptoms (Teacher)	7.51	7.76	.05	−.27*	−.18*	−.21*	.04	.11	.03	.01	.01	−.11	.10	−.08	−.14	.38*	.44*	.26*	.72*	--
19. Conduct Problems (Mother)	1.67	2.64	.06	−.13*	−.09	−.06	.22*	.19*	.11	.10	.14*	−.11	.17*	.10	−.21*	.30*	.18*	.65*	.52*	.39*

Note. Child gender: 1= girls; 2 = boys.

*
p .05.

Table 2

Means, Standard deviations, and Correlations for the Primary Variables in the Study 2 Analyses.

	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Wave 1 Covariates																				
1. Child Gender	0.50	0.50	--																	
2. Family Income	8.47	3.15	-.06	--																
3. Maternal Parenting Quality	4.36	1.63	-.10	.34*	--															
4. Paternal Parenting Quality	3.86	1.61	-.09	.30*	.31*	--														
Wave 1 Interparental Conflict																				
5. Hostile	0.02	0.66	-.02	-.17*	-.30*	-.22*	--													
6. Disengaged	0.02	0.64	.04	-.31*	-.23*	-.18*	.49*	--												
7. Uncooperative	-0.01	0.67	.11	-.16*	-.31*	-.20*	.60*	.55*	--											
Wave 1 Child Emotional Security																				
8. Emotional Reactivity	14.65	5.62	.09	-.15*	-.12	-.01	.18*	.13*	.22*	--										
9. Avoidance	15.40	5.32	.01	-.13*	-.04	-.01	.15*	.08	.15*	.61*	--									
10. Insecure Representations	5.74	2.58	.00	-.28*	-.19*	-.02	.22*	.23*	.21*	.73*	.49*	--								
Wave 2 Child Emotional Security																				
11. Emotional Reactivity	14.13	5.57	.03	-.13	-.15*	-.03	.42*	.32*	.21*	.48*	.38*	.41*	--							
12. Avoidance	15.11	5.48	-.01	.04	-.09	-.03	.34*	.16*	.17*	.43*	.47*	.31*	.69*	--						
13. Negative Representations	5.58	2.44	.04	-.29*	-.21*	-.14*	.31*	.30*	.20*	.33*	.22*	.43*	.70*	.54*	--					
Wave 1 Child Externalizing Problems																				
14. Conduct Problems (Teacher)	0.56	1.37	-.12	-.31*	-.25*	-.22*	.27*	.20*	.22*	.08	.08	.20*	.09	.03	.12	--				
15. SDQ Hyperactive (Teacher)	2.27	2.37	-.27*	-.19*	-.11	-.11	.18*	.16*	.13*	.11	.07	.22*	.05	.00	.08	.54*	--			
16. Delinquency (Mother)	1.28	1.77	-.18*	-.22*	-.18*	-.13*	.18*	.15*	.04	.04	.02	.16*	.13	-.03	.19*	.33*	.34*	--		
Wave 3 Child Externalizing Problems																				
17. Conduct Problems (Teacher)	0.50	1.20	-.07	-.28*	-.06	-.21*	.11	.09	.10	.17*	.08	.26*	.22*	.10	.26*	.47*	.35*	.28*	--	
18. Hyperactive (Teacher)	2.26	2.34	-.19*	-.17*	-.06	-.12	.09	.13	.08	.14*	.08	.24*	.10	.08	.21*	.38*	.48*	.17*	.58*	--
19. Delinquency (Mother)	1.37	2.12	-.08	-.26*	-.17*	-.13	.20*	.06	.18*	.19*	.07	.25*	.21*	.03	.29*	.42*	.29*	.62*	.37*	.22*

Note. Child gender: 0= boys; 1 = girls.

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*
  p .05.